

# Claims

[c1] What is claimed is:

A method for locating a RF signal source using a signal locator comprising:

- a. initiating a search using the signal locator;
- b. obtaining a direction for the RF signal source based upon RF signal readings
- c. moving a certain distance with respect to the direction of the signal and obtaining an initial waypoint reading, where the initial way point reading is based upon the rate of change of the RF signal strength as received by the signal locator;
- d. continuing to traverse with respect to the initial way point reading; and
- e. continuously obtaining subsequent way point readings based upon subsequent directional readings and subsequent distance readings, where the subsequent distance readings are based upon the rate of change of the RF signal strength as received by the signal locator.

[c2] The method for locating the source of a RF signal according to claim 1 further comprising the step of:

- a. triggering each subsequent way point reading.

- [c3] The method for locating the source of a RF signal according to claim 1 further comprising the step of:
  - a. selecting a terrain variable associated with the signal locator.
- [c4] The method for locating the source of a RF signal system according to claim 3, wherein the terrain variable is selected from a range of free space to high density terrain.
- [c5] The method of claim 1, wherein said way point reading is displayed using GPS coordinates.
- [c6] The method of claim 1 further comprising the step of:
  - a. designating a RF signal frequency.
- [c7] The method for locating the source of a RF signal according to claim 1, further including the step of providing a compass reading for direction.
- [c8] The method for locating the source of a RF signal according to claim 1, further including the step of providing at least one search mode.
- [c9] The method for locating the source of a RF signal according to claim 8, wherein the at least one search mode includes a power slope mode, a triangulation mode and a data mapping mode.

- [c10] The method for locating the source of a RF signal according to claim 1, further including the step of providing a visual display for the signal locator.
- [c11] The method for locating the source of a RF signal according to claim 10, further including the steps of:
- a. incorporating a signal strength reading on the visual display;
  - b. displaying the initial way point reading on the visual display; and
  - c. displaying a recommended search mode on the visual display.
- [c12] The method for locating the source of a RF signal according to claim 9, further including the step of providing a GPS coordinate for each search mode.
- [c13] The method for locating the source of a RF signal according to claim 1, further including the step of designating a RF frequency of about 121.5 MHz.
- [c14] The method for locating the source of a RF signal according to claim 1, wherein said signal locator is at least one of a handheld signal locator and a mobile signal locator.
- [c15] A method for locating a RF signal source using a signal locator comprising:

- a. initiating a search using the signal locator;
- b. maneuvering the signal locator toward a plurality of compass directions in order to obtain a RF signal strength OLE\_LINK2 in the plurality of compass direction—sOLE\_LINK2;
- c. obtaining a direction for the RF signal source based upon the RF signal strength in the plurality of compass directions;
- d. providing an initial compass reading toward the signal source;
- e. advancing the signal locator in the direction of the initial compass reading;
- f. initiating a way point reading, based on the directional readings and distance readings, where the distance readings are based upon the rate of change of the RF signal as received by the signal locator;
- g. continuing to advance the signal locator;
- h. initiating a subsequent way point reading, based on subsequent directional readings and subsequent distance readings, where the subsequent distance readings are based upon the rate of change of the RF signal as received by the signal locator;
- i. continuing to advance the signal locator; and
- j. repeating steps g–i until the RF signal source is located.

- [c16] The method for locating the source of a RF signal according to claim 15 further comprising the step of:
  - a. triggering each subsequent way point reading.
- [c17] The method for locating the source of a RF signal according to claim 15 further comprising the step of:
  - a. selecting a terrain variable associated with the signal locator.
- [c18] The method for locating the source of a RF signal system according to claim 17, wherein the terrain variable is selected from a range of free space to high density terrain.
- [c19] The method according to claim 15, wherein said way point reading is displayed using GPS coordinates.
- [c20] The method according to claim 15, further comprising the step of:
  - a. designating a RF signal frequency.
- [c21] The method for locating the source of a RF signal according to claim 15, further including the step of providing at least one search mode.
- [c22] The method for locating the source of a RF signal according to claim 21, wherein the at least one search mode includes a power slope mode, a triangulation mode and a data mapping mode.

- [c23] The method for locating the source of a RF signal according to claim 15, further including the step of providing a visual display for the signal locator.
- [c24] The method for locating the source of a RF signal according to claim 23, further including the steps of:
- a. incorporating a signal strength reading on the visual display;
  - b. displaying the initial way point reading on the visual display; and
  - c. displaying a recommended search mode on the visual display.
- [c25] The method for locating the source of a RF signal according to claim 23, further including the step of providing a GPS coordinate for each search mode.
- [c26] The method for locating the source of a RF signal according to claim 15, further including the step of designating a RF frequency of about 121.5 MHz.
- [c27] The method for locating the source of a RF signal according to claim 15, wherein said signal locator is at least one of a handheld signal locator and a mobile signal locator.
- [c28] A method for locating a RF signal source using a signal

locator comprising:

- a. initiating a search using the signal locator;
- b. obtaining a signal strength level for the RF signal;
- c. traversing in any direction while simultaneously obtaining data over an area;
- d. traversing to a displayed waypoint, where the waypoint is based upon the obtained data; and
- e. continuously obtaining data for subsequent waypoint readings by traversing toward the displayed waypoint.

[c29] A receiver for locating a RF signal source comprising:

- a. a signal processor which processes RF signals received by the receiver;
- b. a memory device;
- c. software residing on said memory device, where said software includes a plurality of operating instructions;
- d. an activation mechanism, where the activation mechanism initiates the receiver into a search mode; and
- e. a graphical display, said the graphic display displaying way point data based on RF signals received, said way point data providing a direction of the RF signal source and a distance between the RF signal source and the receiver, said distance being based upon a path loss slope of the RF signals.

[c30] A system for locating a RF signal source comprising:

- a. a signal locator;

- b. a graphical display on said signal locator;
- c. a processor within the locator, said processor receiving and measuring RF signals emitted by the RF signal source;
- d. an initial way point reading displayed on said graphical display, where said initial way point display including directional and distance data associated with the RF signal source, said directional and distance data being based upon the received RF signals; and
- e. continuous subsequent way point readings displayed on said graphical display, said subsequent way point readings including directional and distance data associated with the RF signal source, and said distance data being based upon a path loss slope of the received RF signals.

[c31] The system for locating a RF signal source according to claim 30, wherein said signal locator is at least one of a handheld locator and a mobile locator.